

# **THE FLUTE STUDY**

**A comparative data base of Flute Studies for  
the development of the pedagogy of the flute**

A dissertation submitted as part of the requirements for the degree of

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# **DECLARATION**

No part of the following dissertation has been accepted for the award of any higher degree or graduate diploma and, to the best of my knowledge and belief, it contains no material previously published or written by another person except where reference is made in the text.

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March, 1998.

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## **ABSTRACT.**

The purpose of this dissertation was to construct a database of flute studies for use by teachers and students. There are difficulties for teachers in the choice of suitable studies caused by geographic isolation or lack of familiarity with, or access to, the available study repertoire. There is also a need to identify currently available technical and study repertoire for the flute, according to criteria of suitability for particular needs of students. In order to address these problems a survey of teachers was undertaken to establish a comprehensive list of criteria relating to the perceived technical needs of students at various levels. Once this was done, approximately three thousand studies from the currently available technical study repertoire were analysed, using the developed criteria. Some collections of studies were also analysed and compared with the general repertoire, and catalogues examined to see if these could be a viable solution to teachers' difficulties. This was found not to be the case, and a database was presented as the most practical solution for teachers searching for studies which address specific technical problems.

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# 1. INTRODUCTION

It has long been accepted that studies need to form an integral part of any student's practice, whatever the instrument, and it is easy to accept the notion that the general practising of studies is important.<sup>1</sup> Studies are an integral part of the practice routine of musicians, both amateur and professional, as they form a link between what are purely technical exercises and the music that all aspire to play and perform. As early as 1791 Johan Reichardt commented on the practice methods of Frederick the Great:

*The King was accustomed to play the flute four to five times a day.  
The first time he grasped the flute was immediately after getting*

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<sup>1</sup> "Studies must always occupy a large part of the practising time". Camden, Archie, Bassoon Technique. London: Oxford University Press, 1975, p 16. "It is important that the student practise study pieces which satisfy at least minimal musical demands and tackle a variety of specific technical problems. . . . When we look at the more advanced study material, I believe opinions can legitimately vary, depending upon the stylistic approach the player wants to develop. . . . I think at this point the player can only be advised to seek out the material which best suits his need and problems." Schuller, Gunther, Horn Technique. London: Oxford University Press, 1971, p74. "Your practice should include one or more studies from a tutor or book of studies, as this will help you to use and combine all the technical points already learned. Most of them are based on scales and arpeggios, articulated rhythms, or certain awkward sequences in remote keys. Unfortunately many are very dull musically and are apt to continue for pages in the same rhythm. Some of the extreme examples of the breed even have a patterned look, like wall paper. Try to avoid these; choose those which appeal to you and play them always as musically as you would any work in the repertoire." Thurston, Frederick, Clarinet Technique. London: Oxford University Press, 1977, p 31. " (We are) not absolutely opposed to finger exercises, scales, arpeggios, nor do (we) reject the study of etudes; but (we) are of the opinion that these means for developing technique are, as a rule, used too much. To sit at the piano and practice scales and exercises for hours and hours, generally without concentration, is a very roundabout way of obtaining results. . . . Thorough study should, however, be applied to only some specially instructive etudes. A small number of thoroughly studied etudes will suffice to develop good technique, which by proper methods of study, can be acquired in an astonishingly short time; whereas the use of many etudes brings only slow progress, wastes the student's time and ruins the nerves." Giesking, Walter, & Liemer, Karl. Piano Technique. New York: Dover Publications, inc. 1972.

*up . . . . The morning practice consisted apparently of a long list by Quantz of various forms of a large number of Scales etc.<sup>2</sup>*

An examination of the studies written by Frederick the Great and Quantz reveals that the material consisted largely of technical exercises of between two lines and half a page, limited almost entirely to scale and arpeggio passages. These exercises were given the title "Solfeggio",<sup>3</sup> the name referring to vocal training by the use of scales, intervals, and melodic exercises for singers.

The idea of the study as it is known today began its development in the early years of the 19<sup>th</sup> Century<sup>4</sup>, and in content it varies much from the two line exercises of Quantz and Frederick the Great<sup>5</sup>. Sets of studies have become concert pieces in their own right, such as the violin Caprices of Paganini and the piano etudes of Chopin (op. 10, 25), or Debussy (bks 1 and 2).

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<sup>2</sup> Reichardt Joh. Fr. Musikalischen Kunstmagazin, Berlin: 1791. Cited by Erwin Schwarz-Reiflingen (ed.) "The Flute Book of Frederick the Great" Weisbaden: Breitkopf & Hartel, 1962, p2.

<sup>3</sup> This title gives a good idea of their design and intended purpose.  
<sup>4</sup> Blom, Eric (ed.) Grove's Dictionary of Music and Musicians. London: Macmillan Publishers Ltd., 1976, vol. 8, p156.

<sup>5</sup> Schwarz-Reiflingen Erwin (ed.) Das Flotenbuch Friedrich des Grofen. Weisbaden: Breitkopf & Hartel, 1962.

An investigation of the commonly used and available flute studies in Australia shows very clearly that a large proportion of them were written in a period from 1800 to 1900.<sup>6</sup> The question is whether or not these studies cover all the various facets of flute technique required. The quantity and diversity of studies available can, ironically, produce difficulties for teachers. Trying to find suitable material for their students can turn into a long and difficult search through vast shelves of music. Also, it is not normally possible to tell anything about a book of studies from a catalogue.

If teachers do not have ready access to a good supply of literature, they commonly use only those books with which they are familiar. These are often the ones that they used themselves when learning. However, there is no guarantee that a student will have the same problems as the teacher, so, although a particular choice may have been appropriate for the teacher, it may not be so for the student.

One way in which teachers attempt to solve the problem of study choice is to use collections of studies, i.e. selections of studies from several different composers, made by various editors. This choice is frequently made on the basis of value for money, or in a search for variety, or in the belief that the studies have extra value because they were considered by the editor to be worthy of inclusion. For these reasons teachers might use

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<sup>6</sup> In the course of collecting books of studies for this thesis, a total of one hundred and eight volumes were examined. This represents a total of approximately three thousand studies. As a comparison, the Vester catalogue contains approximately three hundred and forty books of studies and exercises. Of the studies examined, 76% were written by composers who lived either entirely or for the very large part in the late 18<sup>th</sup> or the 19<sup>th</sup> centuries. The comparable figures for the catalogues of two major music distributors were 70% (Tempest Music in Perth W.A.) and 79% (Zephyr Music in Sydney, N.S.W.)



a collection of studies in the hope of achieving a better result for their pupils. Chapter 2 will examine whether or not collections of studies actually fulfil these hopes by analysing three collections and comparing their contents with available general repertoire.

The other option is to use a catalogue of studies which gives sufficient information for teachers to make informed choices. Two catalogues will be examined. If the collections of studies and the catalogues do not provide the necessary information then another alternative needs to be found.

Chapter 3 will outline the design of a database to present relevant information on studies based on a set of technical criteria. The process by which the list of criteria was developed will be explained and examples given. This database will enable teachers to find any studies that they need for any particular problem that their students might have. It is hoped that the database will be of value in enabling teachers to make better and more informed study selections in their teaching.

In her book Oboe Technique, Evelyn Rothwell states;

*In addition to scales and exercises, studies should be part of your regular practice system. They will help to improve all branches of your technique, and since they are longer and musically more complicated than the exercises, they will tax your powers of concentration and improve your mental discipline.<sup>7</sup>*

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<sup>7</sup> Rothwell, Evelyn. Oboe Technique. London: Oxford University Press, 1974, p.68.

The important point to remember, however, is that if the practising of studies is to achieve maximum usefulness, then the choice of study material has to be carefully made.

## 2. AN EXAMINATION OF AVAILABLE LITERATURE

Studies are a vital part of the practice routine for all musicians but it is important not just to assume that quantity of practice is sufficient in itself. Some careful and discerning choices need to be made if maximum benefit in minimum time is to be achieved. To requote Giesking:

*Thorough study should, (however), be applied to only some specially instructive etudes. A small number of thoroughly studied etudes will suffice to develop good technique, which by proper methods of study, can be acquired in an astonishingly short time; whereas the use of many etudes brings only slow progress, wastes the student's time and ruins the nerves.*<sup>8</sup>

When a teacher attempts to make decisions about suitable study repertoire several options present themselves. On the one hand there is a plethora of books available, by individual composers, covering periods from Quantz to the present day, and styles ranging from Classical, through jazz to atonal. On the other hand the choice for many teachers is not as clear as it might be, partly caused by the very large number of books available, and partly also for some teachers by a lack of access to those books. This brings about the situation where, because so much is potentially useful, it can be difficult to scan the literature to find just the piece which might aid a student to solve a particular problem at a particular time.

One alternative is to use one of the many available collections of studies of different

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<sup>8</sup> *ibid.*

composers.

2.1 Three collections of studies were examined which are in common use and are easily available. They were also chosen because they are about the same difficulty level, and could therefore be compared more easily.<sup>9</sup>

The three books were:

50 Classical Studies

ed. Franz Vester.<sup>10</sup>

Selected Studies

ed. Hymie Voxman.<sup>11</sup>

Selected Studies for Flute

ed. Bantai/Kovacs.<sup>12</sup>

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<sup>9</sup> The studies in these collections were analysed in the same way as the studies used in the construction of the database.

<sup>10</sup> Vester Frans, 50 Classical Studies, London: Universal Edition, 1970.

<sup>11</sup> Voxman Hymie, Selected Studies, Miami (Florida): Rubank Inc., 1968

<sup>12</sup> Bantai Vilmos & Kovacs Gabor, Selected Studies for Flute. Budapest: Editio Musica Budapest, 1980.

### 2.1.1 50 Classical Studies

ed. Franz Vester.<sup>13</sup>

This book is the third in a series of three, arranged in increasing order of difficulty, published in London in 1970, containing studies written by eight different composers.

The preface states:

*The aim of this collection of flute studies is to bring a new and fresh approach to students. Too often in the past they have been advised to devote a large part of their technical practice to the studies of one or another of the great masters of the instrument, and this advice has necessarily resulted in their ignoring works of similar difficulty by composers of different periods and styles. Ideally the student should acquire from his earliest lessons as broad an acquaintance as possible with music of different epochs. The selection of material in this collection has therefore been made from a very wide range of musical periods, covering approximately the two hundred years between 1700-1900. An attempt has been made to compile as varied a selection as possible, including such different types of study as melodic, stylistic, technical and virtuoso, spanning the two centuries. . . . The studies are not arranged in any definite progression of technical difficulty as the needs of each student generally vary.<sup>14</sup>*

Let us examine in detail the criteria that the editor suggests he used and see if these criteria fit the final choice of studies.

Vester says that he made his choice from a wide range of musical periods, covering approximately the years from 1700-1900. It is true that the birth and death dates of the composers used in this collection span approximately two hundred years, the earliest

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<sup>13</sup> Ibid.

<sup>14</sup> Ibid., preface.

composer being Hotteterre le Romain, born in 1650, and the last composer to die being Joachim Andersen who died in 1903. However the pieces actually used in the book to a very large extent cover a much smaller period of music. The time from 1700 to 1800 is represented by only four studies, and the remaining forty-six are grouped in a period with an approximate centre of 1840-1850.

The studies were then analysed. Firstly, the keys were listed. There are of course 24 possible keys, more if enharmonic keys are included<sup>15</sup>. It was found that there was quite an even spread of keys, all keys being included at least once, except some of the enharmonic keys. If a deliberate effort was made to give an even spread of keys, the expectation would be that each key would be included twice with two having an extra appearance. In this collection eleven keys were used twice, six keys once and six keys were used three times. One key is used four times (A flat major).

Secondly, the developed criterion list was used to see if any judgements could be made about the properties of the included studies.<sup>16</sup> Some of the studies had several criteria that could be applied to them, some had none. In total there were 115 appearances of major criteria that could be applied to the studies in the collection.

However, if the studies were to be used for correction of technical problems, the picture is less clear. For example, of the 115 listings, 54, (47%) are listed under the major

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<sup>15</sup> This term refers to two notes with the same pitch but different notation, e.g. F sharp and G flat.

<sup>16</sup> For a detailed description of the development of the criterion list which was used in this analysis and in the final database, see Chapter 3.

heading “Articulation”. Of these 22 refer to legato studies, 11 to triplets, 6 to staccato, 4 to off beat slurs or syncopation, 3 to finger/tongue co-ordination, and 8 to single, double, or triple tonguing. Legato studies are mainly useful for practising evenness of finger work that, it could be argued, is a generally desirable attribute in all playing. While legato studies could be specifically helpful for this problem, having over 40% of the articulation criteria devoted to this problem seems somewhat excessive, especially when less than 15% attempt to remedy problems in all kinds of tonguing.

The rather haphazard choice of studies is made more obvious when the totals for legato studies and studies including long phrases are added together. These two criteria alone account for 46 of the 115 criterion listings, i.e. 40%. Tone as a major criterion is not included at all and dynamics has only one study. It is reasonable to argue that these two areas require specialised studies which are outside the scope of such a volume, but the general unevenness of the choice of studies in this collection, at least as far as specifically remedial studies are concerned, suggests that they were not considered at all in the final selection.

To summarise; Fifty studies have been chosen, all of a difficulty in the area of Grade 7 to 8 (A.M.E.B.). The key spread would suggest that this was a reasonably important factor in the selection process, even though this was not mentioned as a consideration in the preface. Notwithstanding the editor’s comments, the range of periods covered by the studies chosen is in the main quite a small one and therefore does not represent a varied selection. Nor does the collection include the different claimed criteria.

Specifically, of the four criteria stated by Vester, two, melodic and stylistic, are criteria that would have no direct application to the improvement of a student's technique. Also as we have seen, most of the studies in this volume are from a very narrow period of time, limiting variety of styles. If by including the words technical and virtuoso Vester suggests that there is some kind of variety in this area in the studies chosen, then an examination of the studies quickly shows this not to be the case. All of the studies are of a very similar technical standard and style. To sum up, a student would find rather a narrow choice of studies with no systematic effort to cover all necessary technical areas<sup>17</sup>.

### **2.1.2 Selected Studies for Flute.**

ed. Hymie Voxman<sup>18</sup>

This book of studies is subtitled "Advanced Etudes, Scales and Arpeggios in all Major and All Minor Keys," and was published in the U. S. A. in 1948. The editor gives no explanation of the criteria behind his selection of studies but obviously, from the subtitle, key was a major consideration in his choice. The collection consists of fifty-five studies, two in each key with F sharp/G flat major and D sharp/ E flat minor enharmonic keys both being represented. Also included are three studies called by the editor "special studies", and several pages of scales and arpeggios.

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<sup>17</sup> A final comment could be made about the title of this book. "50 Classical Studies" is perhaps misleading, as the word "classical" has a rather specialised periodic meaning in music (the latter part of the 18<sup>th</sup> Century), which does not apply to the studies in Vester's collection. Perhaps "classic" would be more appropriate.

<sup>18</sup> Ibid.



The studies in this collection are of a similar standard to the Vester volume i.e. approximately Grade 7-8 (A.M.E.B.) No claims are made as to the variety of styles or composers, but in this volume eleven different composers are used, an almost identical figure to the Vester collection. There is only one composer common to the two volumes (Andersen). Voxman uses two rather obscure composers (Heinze and Ferling ) and interestingly includes several pieces by J. S. Bach. While not strictly studies in the conventional sense of the word, these movements from several of the solo suites are acknowledged as extremely valuable works for technical and interpretative study, as well as being full of musical interest.<sup>19</sup> This last point is significant, as keeping the interest of students while they practise what can be utterly boring studies by little known composers is well known to be a daunting task for teachers.

An analysis of the chronological spread of works was carried out in a similar fashion to that done on the Vester studies. The period 1700-1800 was represented by 23 studies and the period 1800-1900 by 24 studies. The dates of two composers could not be found so they were not included. If the periods were narrowed to 50 years a rough division was obtained as follows: 1700-1750, 9 studies, 1750-1800, 14 studies, 1800-1850, 6 studies, and 1850-1900, 18 studies. This suggests a much more even spread of styles over the

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<sup>19</sup> " Flautists, however advanced, will find the pieces bristling with problems of phrasing, articulation and breath control and, it need hardly be said, musically more rewarding than the studies specially composed by the flute virtuosi of the past" (author's underlining). Spiegel, Fritz. (ed.) Bach for Unaccompanied Flute. London: Oxford University Press 1965, p 1.

relevant period than in the Vester book. Interestingly, the period around 1840, which is the most heavily represented in the Vester work, is the least well covered by Voxman.<sup>20</sup>

The next consideration was that of major criteria represented in the chosen studies. Once again a compilation was made from the accumulated data. Results from this analysis showed a total of 103 criterion listings. Once again the major heading “Articulation” had by far the largest representation, a total of 45, or 43%. 21 of these refer to legato studies, 7 to triplets, 7 to staccato, 3 to finger/tongue co-ordination, and 7 to single, double, triple, or mixed articulations. The numbers under each heading are rather similar to the Vester volume except for off beat slurs/syncopation, which are not included in the Voxman book.

### **2.1.3 Selected Studies for Flute, vol. 3.**

ed. Bantai/Kovacs<sup>21</sup>

This set of collected studies was published in Hungary in 1980. It contains 45 studies covering a similar standard to the two previous volumes, and sources its material from similar composers, but also includes some East European composers who may well not be familiar to Australian teachers and students. Some Bulgarian folk music is also added, which gives students experience of playing in unusual time signatures. (e.g. 7/8,

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<sup>20</sup> Possibly copyright restrictions could have prevented the inclusion of some studies in the American publication.

<sup>21</sup> Ibid.

15/16) The editors confine themselves to a brief comment on their selections: “*The selection was made according to technical usefulness and musical value*”.<sup>22</sup>

One major difference from the other two collections is that this collection does not include any studies written before 1800, and does include some written in the 20<sup>th</sup> Century. While it is not possible to ascribe accurate dates to the individual studies, a reasonable estimate of the total number of works written in the 19<sup>th</sup> Century can be gained from the birth and death dates of the composers whose works were included. This gives a division of 28 from the 19<sup>th</sup> Century and 17 from the 20<sup>th</sup> Century. The investigation of key also showed a variation from the previous two volumes. Of the possible 24 keys, 15 are used, 10 major and 5 minor. Of the five minor keys used, four were used four times and the other twice. Three major keys were used three times and seven were used once each. The conclusion to be drawn is that there seems to have been no attempt to use keys as a factor in the choice of studies.

Once again the studies were analysed to see what criteria they contained. In total there were 109 in 24 different categories. As in the other two collections, the major heading “Articulation” was the most commonly represented, with 42 (39%) of the included criteria. Of these, 18 (43%) are legato studies with the remainder spread between the other criteria. The other major heading with a large representation is “Finger-work”,

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<sup>22</sup> Ibid., p 3.

22 of 109 (20%). However 15 of these were evenness of finger-work, which, it has been already shown, is a desirable end of all studies and so should perhaps not be included as a criterion.

## **2.2 SUMMARY.**

All of the analysis above was done in order to examine the proposition that collections of studies can be a solution for teachers who are seeking studies that offer more than just an overview of the general repertoire.

To examine this question in detail it is necessary to summarise and compare the three collections both with general repertoire and each other a table was prepared, listing the major criterion headings for each collection.

The data is listed in Appendix A, and is given in the form of percentages to enable direct comparisons to be made. When this list is examined it becomes immediately apparent that four of the headings figure prominently in all three books, namely long phrases, legato playing and evenness of fingerwork and interpretation, with triplet groups also quite strongly represented. Does this mean that those particular criteria are considered to be most important, is it just coincidence that they appear to such a similar degree in all three books chosen, or is it that this is simply a reflection of the overall properties of all the studies written for flute?

The third of these questions is the critical one, because if an examination of all the available books of studies shows a proportion of criteria which is similar to that shown

in the three books chosen, then it cannot be said that the editors chose particular studies for any particular technical reason. A random sample could reasonably be expected to have a similar distribution. In order to test this the percentage appearance of each of the criteria for all available studies was collected, and these were compared with their appearance in the three collections. Those books of studies obviously written for specific problems were included in this examination, as they could have been included in any collections. The results are given in Appendix B.<sup>23</sup>

In order for a direct comparison to be made between the three collections of studies and the total of all the studies in the database, a graph was plotted. (Figure 2.1). The results show that there are significant peaks in seven places, with three major peaks: long phrases, legato playing, and evenness of finger work. What is most significant is the fact that the general shape of the graphs plotted for each of the three collections is similar to that obtained for the plot for all the studies collected. Further, if the line for the combination of the three collections is plotted (Figure 2.2), then the fit is even better. On this chart the two lines are the same within an error of two percent, except in one area. Over this portion of the graph, involving three criteria (numbers 13, 14 and 15), the combined collection line is lower. The fact that the combined collection line is lower means that these criteria are under represented in the collections when compared with all the studies analysed. A variation of two percent in a volume of fifty studies represents only one study, or in the total of three volumes is less than three studies, so

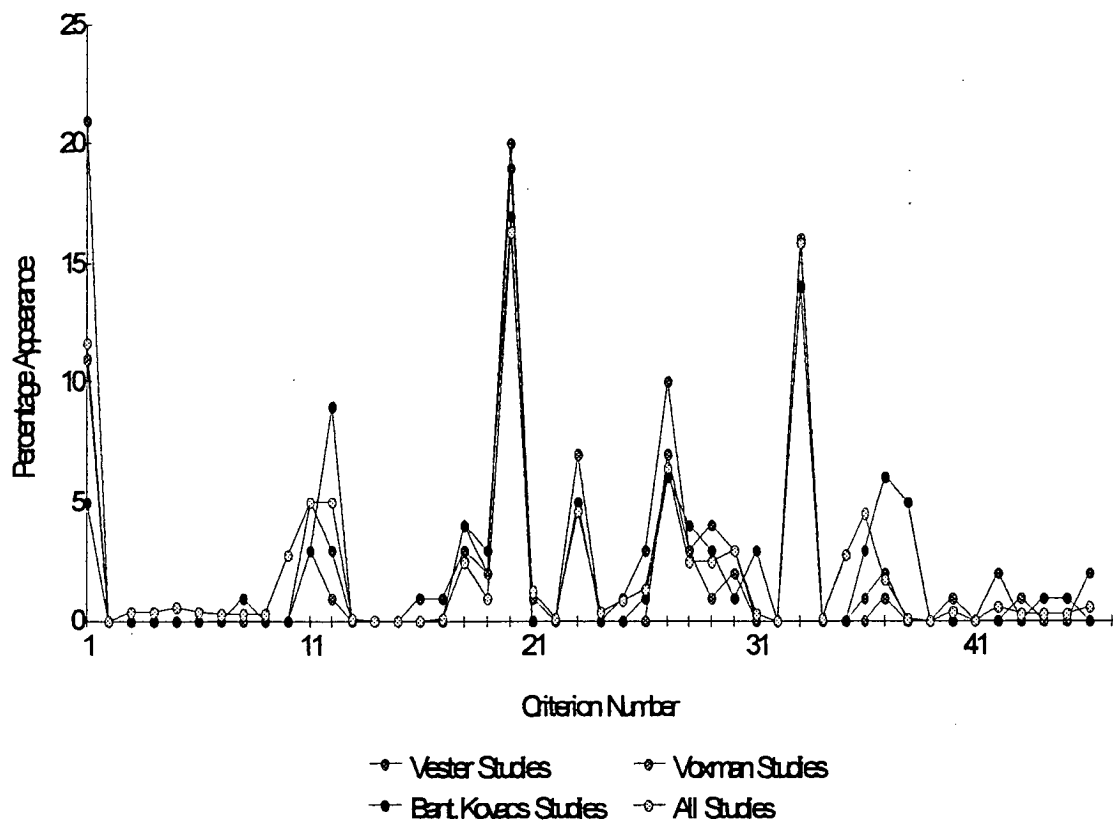
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<sup>23</sup> These figures are percentages and were of necessity rounded, so some of the criteria may appear to have zero appearance, where in fact a small number of examples were found.

the number is very small. If two studies had deliberately been included to feature one particular criterion, as opposed to the general proportion in all studies, this would have been enough to bias the figures in a positive direction on the graph. No such bias appears. This means that the studies in the three collections have been chosen to contain a mix of technical problems which is not in any significant way different

**FIGURE 2.1**

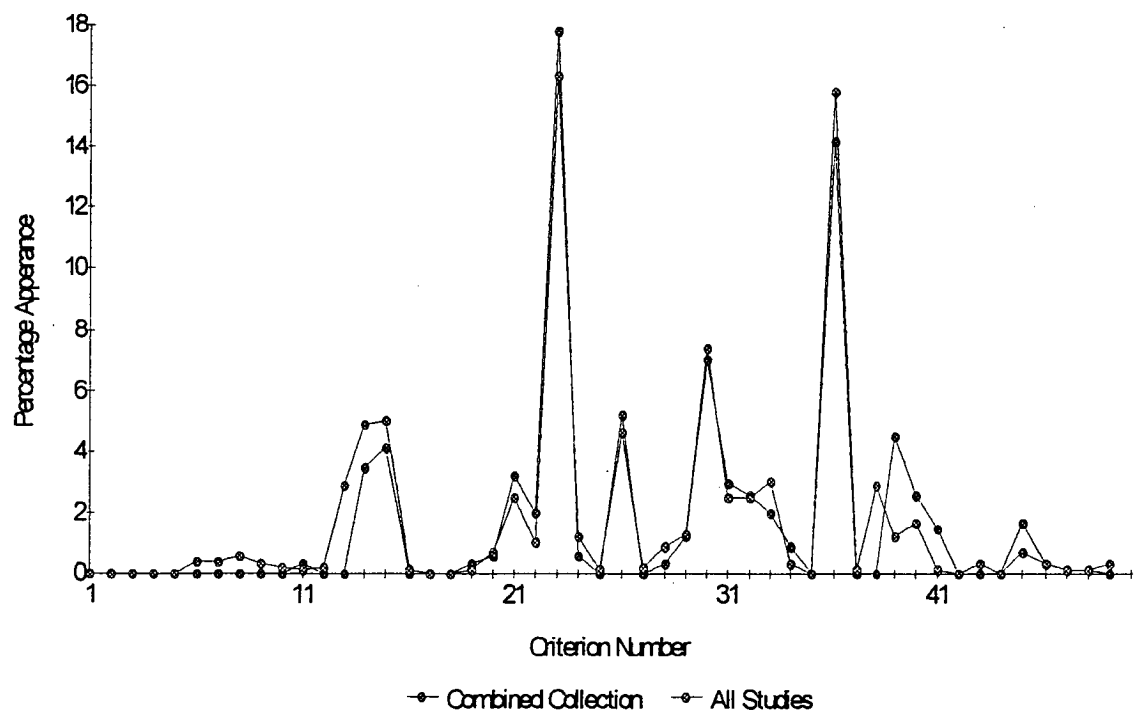
This Chart compares the percentage appearance of each criterion in each compendium with that found for the total of all studies surveyed.



(within a two percent error ) from a mixture which would have been obtained if a purely random sample was taken of all available studies. Also, the collections of studies do not vary in any significant way from each other, even though they were gathered by three different people in three different countries over a period of thirty years.

**FIGURE 2.2**

This chart compares the percentage appearance of each criterion in an aggregation of the three collections of studies with that found for the total of all studies examined.



From the preceding analysis and discussion it has become clear that collections of studies do not give a good choice of studies for teachers who want anything other than a general cross section of the study repertoire. The only three criteria that have been shown to be common to these collections are the key of the study, the difficulty of the study, and the variety of the study. There are also three main reasons why a teacher might wish to buy such collection.

(i.) Convenience.

This is an important reason for a teacher's choosing to use such a volume, as it makes the choice of studies for students a much simpler proposition. The assumption is that the editor has done all the hard work of analysis and comparison, and made choices that the teacher can trust to be good ones based on the editor's wide experience of such matters. However, as has been shown above, the criteria for the choices made are often rather limited, and quite possibly not the ones that a teacher would have used. But it is reasonable for a teacher to assume that an editor has potential access to a much larger range of repertoire.

(ii.) Variety.

This is the only obvious application to teaching that agrees with the criteria actually found to have been used by editors. It is a significant factor. If students do not like a particular composer, they can take heart from the fact that there are not many more studies by that composer before they get a change. This is an important consideration



because boredom can markedly affect a student's performance and work habits. (Refer to footnote on page 1 from Giesking and Liemer.)

(iii.) Cost.

This is a major factor, as to be able to buy a collection of studies containing the works of perhaps twenty different composers, instead of having to buy twenty different books for a similar result, is a powerful argument in favour of such books.

While collections are a useful means of acquiring a general overview of the available study repertoire, the fact remains that if a teacher wishes to be selective in choosing studies for a student, these collections are not the best way of achieving the desired result. So if a teacher needs specific information, what other possibilities exist?

### 2.3 CATALOGUES

Catalogues are another possible source of useful information about the repertoire. These attempt to list studies and give some information about them. Two such volumes were found and examined.

The "Flute Repertoire Catalogue", prepared by Franz Vester<sup>24</sup>, contains title and publication details of 10,000 titles of music for flute and books about the flute. It is the result of Vester's own investigations and examination of catalogues over fifteen years. A typical entry is as follows:

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<sup>24</sup> Vester Franz, Flute Repertoire Catalogue. London: Musica Rara, 1967.

Genzmer, Harald (b1909) 12 Modern Studies bk 2 (nos 13-24) Schott 1964.<sup>25</sup>

This is of little value to a teacher who wants to know more than that the book exists, and has been published.

The "Handbook of Literature for the Flute", prepared by James Pellerite<sup>26</sup>, is of more value in that it attempts to give a grading for each book of studies included. The grading system used is explained in the General Information section of the book and has nine levels. These levels do not correspond directly to any system familiar to Australian teachers, such as the A.M.E.B. However it is not difficult to relate them to A.M.E.B. grades provided that the teacher has familiarity with enough repertoire. Information is limited to a very general and limited overview of each book. Each chapter addresses a particular type of composition, and is divided into graded sections. A typical entry from the chapter headed "Daily Exercises, Etudes and Methods, grade 5-6" is as follows:

"Genzmer, Harald, Modern Studies, vol. 2. (+) (S-9) *The full register of the flute is spanned in this volume; rhythmic studies demanding of musical expression; highly technical with polytonal thematic elements.*"<sup>27</sup>

Details of individual studies in each book are not given.

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<sup>25</sup> Ibid., p 348.

<sup>26</sup> Pellerite James, A Handbook of Literature for the Flute. Indiana: Zalo Publications 1978.

<sup>27</sup> Ibid., p 21 (+) indicates that the piece contains material too difficult for its grading level. (S-9) is a coding for the publisher.

It is clear from the examples given above that catalogues, while they have their uses, are only as good as the information that the reader brings to them. Those teachers who do not already know at least something of the studies already will have very little added to their knowledge.

The preceding analysis of collections of studies and examination of catalogues shows that there is little of value in these volumes for teachers wishing to make an informed and selective choice from the general repertoire. Clearly what is needed is a method for quickly scanning the repertoire to discover suitable studies for whatever purpose the teacher may have in mind. An efficient way of doing this is by using a database that includes a large number of commonly available studies. The usefulness of the database will depend on the access to the data it contains. Therefore the organisation of the database, its ease of use, the ability to search, and the list of criteria which it uses, are most important.

### 3. THE DESIGN OF THE DATABASE

The first step in designing the database was to decide which factors of general technique needed to be targeted in any analysis of studies. Obviously such areas as overall difficulty, using a suitable method of determination, and key of the study (when appropriate) needed to be included but, after that, the criteria to be included became less clear.

The generation of the criterion list was carried out in two stages. Firstly, a list was compiled from personal experience. Secondly, a large number of teachers were consulted as to what they considered to be important criteria. Then the body of study repertoire which had been collected was examined to discover which criteria were present in the general study literature. Some extra criteria were discovered during this stage.

A trial list was prepared. Initially the major areas of technique were considered and the following headings were developed:

*Breathing, Tone, Embouchure, Dynamics, Articulation, Finger-work, Reading Problems, Interpretation.*

Each of these areas was then considered in detail and a number of specific criteria were developed under each major heading. Inevitably there was a degree of overlap, but at

this stage it was enough to produce the list, leaving for later consideration the questions of position and final meaning.

### **3.1 SURVEY OF FLUTE TEACHERS.**

Once a trial list was prepared, it was submitted for consideration by other flute teachers. A survey was sent out to flute teachers throughout Tasmania and Victoria (See Appendix C). The list was drawn from two organisations, the Tasmanian branch of the A.M.E.B. and the Victorian Flute Society.<sup>28</sup> A total of eighty-one teachers were contacted, forty-three in Tasmania and thirty-eight in Victoria. Of these forty-nine responded, a response rate of 60% overall. In Tasmania the rate was 58% and in Victoria 63%. Going further afield than this was felt to be unwarranted, both because a large enough sample had been found, and to ensure the manageability of the survey administration.

The survey took the form of a letter explaining the aims of the project and inviting the teachers to indicate the importance of each criterion (See Appendix D). The survey form was prepared with the intention of ensuring a large response. Teachers were presented with the list of criteria, arranged in major headings with the subheadings indicated, and invited to indicate their feelings over a range of one to five, as to the importance of each subheading in the context of teaching students. Further, they were asked for their general comments on the value of studies, to indicate any preferences for

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<sup>28</sup> The A.M.E.B. in Tasmania was the only branch of this organisation in Australia which had its membership information arranged in such a way as to make it possible to select only flute teachers, and the Victorian Flute Society was contacted to increase the size of the sample.

particular study books, for any suggestions as to extra criteria, and for any comments at all that they felt might be useful.

The results obtained are listed below in Table 2.1.<sup>29</sup>

Many teachers did not differentiate between the various criteria to any great degree, but felt that they were all equally important. However some of the areas, e.g. double and triple tonguing might need more weighting at a later stage.

One wrote,

*I consider all of these factors equally important in training any serious student. We have many fine publications given to study of specific factors, but in view of the fact that ultimate performance goals include all of these factors, I would consider a good sensitive teacher should be able to target specific phrases from normal repertoire works to correct deficiencies which occur in different students.*

Another,

*All the examples of technique described in the survey. . . . deserve at some time a 5 on the importance scale. It depends on the stage and standard at which a pupil is playing, where you concentrate your efforts.*

These two comments demonstrate two extremes of opinion. The first suggests that there is no need for a database at all and that a teacher would normally hunt through the literature looking for suitable examples to help their students' problems. This would be a formidable task for teachers, even assuming that they had access to sufficient repertoire. The second quote emphasises the need for a database by pointing out the

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<sup>29</sup> For a further analysis, see Appendix E.

specifics of what they demand. The ability of the database user to search for several various criteria at once enables individual teachers to make decisions as to when specific technical aspects should be introduced, especially as the information gathered on each study includes an estimate of its difficulty level.

### **3.1.1 RESULTS OF THE SURVEY.**

The survey returns were then analysed. The overall variation of the results is not very great, the lowest average score being 3.33 (triple tonguing) and the highest being 4.94 (rhythm). However some trends are of interest. For example the values for single, double and triple tonguing showed a definite drop in perceived importance, from a score of 4.47 for single tonguing, to 3.92 for double tonguing, to 3.33 for triple tonguing. This demonstrates quite nicely the point made above by the second correspondent, concerning the importance of criteria at differing levels of ability. The two areas thought to be most important by the greatest number of teachers were intonation and rhythm, with the least important area thought to be triple tonguing, followed by vibrato. As triple tonguing and vibrato could be said to be concerns mainly for more advanced students, such results are not surprising.

## FIGURE 3.1

Criteria and average assigned values.

Value is on a 1-5 scale, 5 being the highest.

Heading.	Criterion No.	Criterion.	Assigned Value.
Breathing	1	Slow Phrases	4.43
	2	Fast Phrases	3.73
	3	Long Notes	4.55
	4	Stamina	4.08
Tone	5	Colour	3.95
	6	Quality	4.47
	7	Intonation	4.76
	8	Vibrato	3.49
	9	Evenness across Registers	4.31
	10	Low Register	4.16
	11	Middle Register	3.79
	12	High Register	4.26
Embouchure	13	Slurred Passages	3.67
	14	Interval Leaps	4.36
	15	Evenness across Registers	4.12
	16	Dynamic Changes	4.32
Dynamics	17	Flexibility	4.18
	18	Intonation	4.53
	19	Range	4.29
Articulation	20	Single Tonguing	4.47
	21	Double Tonguing	3.92
	22	Triple Tonguing	3.33
	23	Legato	4.24
	24	Mezzo Staccato	4.04
	25	Staccato	4.29
	26	Diaphragm	3.69
	27	Accents	3.92
Finger Work	28	Scale Passages	4.57
	29	Arpeggio Passages	4.51
	30	Non Diatonic Passages	3.92
	31	Special Problems	4.10
Reading Problems	32	Awkward Notations	3.69
	33	Less Common Keys	4.65
	34	Rhythm	4.94
	35	Metre	4.00



After these processes were completed, an analysis of the study repertoire was begun, using the criterion list developed. As this process continued extra criteria were included when it became apparent that there was a need for them. It was also found useful to introduce two categories of criteria, primary and secondary. This was done to differentiate between studies that made a feature of a particular criterion, and those that included it, but not necessarily to a major extent.

The final criterion list developed is similar to the original one that was used as the basis of the survey, but has been augmented in some areas and rationalised in others. The final list is detailed in Figure Four.

### **3.2 DETAILS OF THE FINAL CRITERION LIST.**

Each of these criteria will now be described and an example given of a study which includes the criterion.

#### **3.2.1. BREATHING.**

That aspect of technique which deals with breath control.

##### **i. *Long Notes.***

Example: Moyse, Marcel. *De la Sonorite*, ex. 4.<sup>30</sup>

This criterion covers the practising of long notes for the improvement of continuity and evenness of airflow.

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<sup>30</sup> Moyse, Marcel, De la Sonorite. Paris: Alphonse Leduc, 1934, p 23.

**FIGURE 3.2**  
**Final Criterion List.**

Heading	Criterion Number	Criterion
Breathing	1	Long notes
	2	Long phrases
	3	Long studies
	4	Vibrato
Tone	5	Colour
	6	Quality
	7	Intonation
	8	Evenness across registers
	9	Low register
	10	Middle register
Embouchure	11	High register
	12	Interval leaps
	13	Harmonics
	14	Multiphonics
Dynamics	15	Range of dynamics
Articulation	16	Single tonguing
	17	Double tonguing
	18	Triple tonguing
	19	Legato
	20	Mezzo staccato
	21	Staccato
	22	Accents
	23	Syncopation
	24	Off beat slurs
	25	Triplet groups
Finger work	26	Flutter Tonguing
	27	Scale passages
	28	Arpeggio passages
	29	Diatonic passages
	30	Low register finger work
Reading problems	31	High register finger work
	32	Awkward notations
	33	Durational rhythm
Interpretation	34	Metre
	35	
	36	
	37	
	38	
General technique	39	
Jazz		
Extended techniques		
Special exercises		

ii. *Long Phrases.*

Example: Altes, Henry. *26 Selected Studies* no. 17.<sup>31</sup>

This criterion refers to breathing necessary to accommodate long phrases of music. A long phrase has been roughly defined as one of more than about four bars although the length will vary with tempo, and as the student develops, and of course the length of any phrase can be varied by the simple means of leaving out or changing breathing places.

iii. *Long Studies.*

Example: Altes, Henry. *26 Selected Studies* no. 17.<sup>32</sup>

A long study has been defined as one of three pages or more.

iv. *Vibrato.*

Example: Wye Trevor, *A Practice Book for the Flute*, vol. 4, section 9.<sup>33</sup>

Vibrato is included under breathing even though it has an effect on tone, as it is a variation of air quantity brought about by the muscles involved in breathing.

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<sup>31</sup> Altes, Henry. 26 Selected Studies. London: Schirmer, 1945, p 50.

<sup>32</sup> Ibid., p 50.

<sup>33</sup> Wye, Trevor. A Practice Book for the Flute, vol. 4. U.K.: Novello, 1982, p 19.

### 3.2.2 TONE.

That aspect of technique which deals with sound.

i. *Colour.*

Example: Wye, Trevor, *A Practice Book for the Flute*, vol. 1, section 3.<sup>34</sup>

This criterion refers to the timbre of a sound, be it light, dark, bright or otherwise. This is very much a matter of personal taste, but there are exercises that can aid in the search for the kind of sound that a player wishes to produce.

ii. *Quality.*

Example: Wye, Trevor, *A Practice Book for the Flute*, vol. 1, section 1.<sup>35</sup>

This refers to specific defects in the sound e.g. lack of focus, incorrect angle of airstream.<sup>36</sup>

iii. *Intonation.*

Example: Wye, Trevor. *A Practice Book for the Flute*, vol. 1, section 6.<sup>37</sup>

There are some studies and exercises specifically designed for improving intonation. No assumption has been made about equal temperament or otherwise.

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<sup>34</sup> Wye, Trevor. *A Practice Book for the Flute*, vol. 1. U.K.: Novello, 1979, p 24.

<sup>35</sup> Ibid., p 5.

<sup>36</sup> For a fuller discussion of this and the previous subheading see Wye, Trevor. *A Practice Book For the Flute*, vol. 1, U.K.: Novello, 1979

<sup>37</sup> Ibid., p 32.

iv. *Evenness across registers.*

Example: Wye, Trevor. *A Practice Book for the Flute*, vol. 5, all sections.<sup>38</sup>

The sound of a flute varies depending on which register it is in. An even sound across all registers is normally considered to be desirable.

v. *Low register*

Example: Moyse, Marcel, *Tone Development Through Interpretation*.<sup>39</sup>

Each octave of the flute has its own problems of tone production and in books of tone exercises the three registers are routinely divided. The range of the flute for normal purposes is three octaves up from middle C (261cps) on the piano. The low register refers to the bottom octave on the flute.

vi. *Middle register.*

Example: Moyse, Marcel, *Tone Development Through Interpretation*.<sup>40</sup>

This refers to the second octave.

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<sup>38</sup> Wye, Trevor. A Practice Book for the Flute, vol. 5. U.K.: Novello, 1986.

<sup>39</sup> Moyse, Marcel. Tone Development Through Interpretation. New York: Marx, 1962.

<sup>40</sup> Ibid.

vii. *High register.*

Example: Moyse, Marcel, *Tone Development Through Interpretation*.<sup>41</sup>

This refers to the third or top octave on the flute.

### 3.2.3 EMBOUCHURE.

That aspect of technique which deals with the formation of the lips on the mouthpiece of the flute.

i. *Interval Leaps.*

Example: Altes, Henry. *26 Selected Studies, no. 1*.<sup>42</sup>

The intention of this criterion was to indicate only those intervals that are wider than a fifth.

ii. *Harmonics.*

Example: Rynearson, Paul. *11 Contemporary Flute Etudes, no. 4*.<sup>43</sup>

This criterion refers to the overblowing of a fundamental note in order to produce a note of a higher pitch from the harmonic series of the fundamental.

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<sup>41</sup> Ibid.

<sup>42</sup> Ibid., p 1.

<sup>43</sup> Rynearson, Paul. 11 Contemporary Flute Etudes. California: W.I.M. 1968, p 5.

iii. *Multiphonics.*

Example: Dick, Robert. *The Other Flute, Chapter 3.*<sup>44</sup>

This is a technique used in contemporary music to produce several different pitches simultaneously.

### 3.2.4 DYNAMICS.

That aspect of technique which deals with sound quantity.

i. *Range of dynamics.*

Example: Fisenden, Owen. *Formula for Fluting.*<sup>45</sup>

The only studies listed under this criterion are those that specifically attempt to deal with dynamic change, as opposed to those which include dynamics.

### 3.2.5 ARTICULATION.

That aspect of technique which deals with use of the tongue.

i. *Single tonguing.*

Example: Andersen, Joachim, *24 Etudes op. 15 no. 9a.*<sup>46</sup>

This heading refers to single forward tonguing stroke similar to that required to make the sound "t" or "d".

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<sup>44</sup> Dick, Robert. The Other Flute. New York: Edu-Tainment Publ. Co., 1978, p 32.

<sup>45</sup> Fisenden, Owen. Formula for Fluting. Sydney: Albert, 1976, p 5.

<sup>46</sup> Andersen, Joachim. 24 Etudes op. 15. New Jersey: Ashley, 1978, p 20.

ii. *Double tonguing.*

Example: Andersen, Joachim, *24 Instructive Studies*, op. 30 no. 11.<sup>47</sup>

This heading refers to a pair of tonguing strokes, one forward and one back, as in the production of the sounds “t, k.”

iii. *Triple tonguing.*

Example: Altes, Henry. *26 Selected Studies*, no. 1.<sup>48</sup>

This heading refers to a group of three tonguing strokes, produced in a pattern of t, k, t, used for the tonguing of triplets.

iv. *Legato.*

Example: Altes, Henry. *26 Selected Studies*, no. 13.<sup>49</sup>

v. *Mezzo staccato.*

Example: Moyse, Marcel. *24 Short Studies with Variations*, no. 1.<sup>50</sup>

vi. *Staccato.*

Example: Altes, Henry, *26 Selected Studies*, no. 2.<sup>51</sup>

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<sup>47</sup> Andersen, Joachim. *24 Instructive Studies*, op. 30. Ohio: Andraud, 1942, p 12.

<sup>48</sup> Ibid., p 2.

<sup>49</sup> Ibid., p 36.

<sup>50</sup> Moyse, Marcel. *24 Short Studies with Variations*. Paris: Leduc, 1932, p 1.

<sup>51</sup> Ibid., p 4.



vii. *Accents.*

Example: Andersen, Joachim. *26 Little Caprices, op. 37 no. 22.*<sup>52</sup>

All the studies in the data base which include this criterion have the style of accent only. >

viii. *Syncopation.*

Example: Holcombe, Bill. *24 Jazz Studies for Flute no. 1.*<sup>53</sup>

This criterion contains studies which show an alteration of the normal time accents of the bar.

ix. *Off beat slurs.*

Example: Altes, Henry. *26 Selected Studies for Flute, no. 3.*<sup>54</sup>

This criterion contains studies which use a pattern of slurring.



<sup>52</sup> Andersen, Joachim. *26 Little Caprices, op.37.* New York: I.M.C. 1932, p 22.

<sup>53</sup> Holcombe, Bill. *24 Jazz Studies for Flute.* U.S.A.: Musicians Publ. 1984, p 4.

<sup>54</sup> Ibid., p 6.

x. *Triplet Groups.*

Example: Altes, Henry. *26 Selected Studies for Flute, no. 5.*<sup>55</sup>

For the purposes of this data base only triplet groups were included<sup>56</sup>.

xi. *Flutter Tonguing.*

Example: Rynearson, Paul. *Eleven Contemporary Flute Etudes, no. 4.*<sup>57</sup>

Flutter tounguing is a regular vibration of either the front or the back of the tongue to produce a special effect.

### 3.2.6 FINGER-WORK.

That aspect of technique which deals with finger usage.

i. *Scale passages.*<sup>58</sup>

Example: Andersen, Joachim. *24 Etudes, op. 15 no. 5.*<sup>59</sup>

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<sup>55</sup> Ibid., p 10.

<sup>56</sup> Other groupings do exist, but none of any significance appeared in the studies analysed.

<sup>57</sup> Ibid., p 5.

<sup>58</sup> While analysing the studies it became clear that the boundaries of sub-headings 6.1 and 6.2 were unclear, as there were many studies that included both types of passage work in varying degrees, with no clear emphasis either way. There were many instances where a study had some arpeggio passages, for example, but barely enough to warrant inclusion in this category. For a time amalgamating the two sub-headings was considered, but eventually it was decided that if they were to be included at all they should be separate, because there are times when it is necessary to practise one type of passage as opposed to another. This decision was aided by the inclusion in the survey of a "primary and secondary criterion" feature. This enable studies which had some scale and some arpeggio passage to be included under both sub-headings, but listed as secondary features.

<sup>59</sup> Ibid., p 12.

ii. *Arpeggio passages.*

Example: Andersen, Joachim. *24 Etudes, op. 15 no. 1.*<sup>60</sup>

iii. *Diatonic passages.*

Example: Genzmer, Harald. *Modern Studies for Flute, no. 1.*<sup>61</sup>

For the purposes of the analysis the sub-heading “diatonic passages” was defined as studies which have no particular key centre.

iv. *Low register.*

Example: Buyssens, Paul. *25 Exercises for Flute, no. 18.*<sup>62</sup>

This criterion refers to the bottom octave of the flute, i.e. from middle C up one octave.

v. *High register.*

Example: Wood, Daniel. *Studies for the Upper Notes of the Flute.*<sup>63</sup>

This criterion refers to the top octave of the flute, i.e. from two octaves above middle C to three octaves above middle C.

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<sup>60</sup> Ibid., p 2.

<sup>61</sup> Genzmer, Harald. *Modern Studies for Flute*. Mainz: Schott, 1956, p 2.

<sup>62</sup> Buyssens, Paul. *25 Exercises for Flute*. Paris: Leduc, p 45.

<sup>63</sup> Wood, Daniel. *Studies for the Upper Notes of the Flute*. New York: Fischer, 1966.

### 3.2.7 READING PROBLEMS.

That aspect of technique which deals with recognition of note length and pitch.

i. *Awkward notations.*

Example: Andersen, Joachim. *24 Studies op. 21 no. 3.*<sup>64</sup>

This criterion is intended to describe those studies with a large number of accidentals, the actual quantity per study needed to qualify for inclusion being a matter of judgement. "Awkward" is intended to refer to the problems of reading accidentals as well as playing them.

ii. *Durational Rhythm.*

Example: Andersen, Joachim. *24 Studies op. 21 no. 15.*<sup>65</sup>

This criterion includes those studies that are intended to help students practice various durational rhythmic passages.

iii. *Metre.*

This criterion identifies, where appropriate, the time signature of the study.

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<sup>64</sup>Andersen, Joachim. *24 Studies, op. 21.* New York: Schirmer, 1944, p 4.

<sup>65</sup> Ibid., p 16.

### 3.2.8 ORNAMENTS.

That aspect of technique which deals with the playing of ornaments.

i. *Acciacaturas.*

Example: Furstenau, Anton. *26 Studies op. 107, no. 16.*<sup>66</sup>

ii. *Appogiaturas.*

Example: Dressler, Raphael. *Useful Exercises for the Flute, no. 1.*<sup>67</sup>

iii. *Trills.*

Example: Andersen, Joachim. *24 Instructive Studies, op. 30 no. 9.*<sup>68</sup>

iv. *Turns.*

Example: Andersen, Joachim. *26 Little Caprices, op. 37 no. 20.*<sup>69</sup>

v. *Mordents.*

Example: Andersen, Joachim. *24 Studies, op. 21 no. 8.*<sup>70</sup>

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<sup>66</sup> Furstenau, Anton. *26 Studies, op. 107.* Leipzig: Peters, 1963, vol. 2 p 4.

<sup>67</sup> Dressler, Raphael. *Useful Exercises for the Flute.* London: Rudall Carte, p 1.

<sup>68</sup> Ibid., p 10.

<sup>69</sup> Ibid., p 20.

<sup>70</sup> Ibid., p 9.

vi. *Arpeggios.*

The intention of this heading was to include those studies that contain arpeggios written in such a way as to indicate that they are to be played as ornaments.

Example: Furstenau, Anton. *26 Studies, op. 107 no. 18.*<sup>71</sup>

vii. *Mixtures of Ornaments.*

Example: Vester, Frans. *125 Easy Classical Studies no. 115.*<sup>72</sup>

viii. *Cadenzas.*

Example: Altes, Henry. *26 Selected Studies, no. 16.*<sup>73</sup>

### 3.2.9 INTERPRETATION.

That aspect of technique which deals with musical ideas, specifically musical expression and rubato.

Example: Moyse, Marcel. *Tone Development Through Interpretation.*<sup>74</sup>

Some studies are apparently intended for the specific practice of musical expression and rubato. Rubato is a technique that it is not possible to indicate on the page, especially as the placing and degree vary with the performer, but in general slow studies or those including cadenza passages are suitable for

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<sup>71</sup> Ibid., vol. 2 no. 8.

<sup>72</sup> Vester, Frans, (ed) 125 Easy Classical Studies. London: U.E., 1976, p 50.

<sup>73</sup> Ibid., p 47.

<sup>74</sup> Ibid.

inclusion under this heading.

### 3.2.10 GENERAL TECHNIQUE.

Very early in the analysis it was found that many studies did not appear to address any particular difficulties at all, apart from the need to practise difficult works to achieve a better level of general technique, and to help improve concentration.

Example: Paganini, Niccolo. *24 Caprices*.<sup>75</sup>

At the other end of the scale, virtually all the very simple studies fall into this category also, because beginner students are still trying to learn to play the instrument in the most basic sense of the word.

Example: Vester, Frans (ed.). *125 Easy Classical Studies*.<sup>76</sup>

### 3.2.11 JAZZ.

Example: Bay, Bill. *Mel Bay's Jazz Flute Studies*.<sup>77</sup>

This heading was included to cover those studies which appear to have been written in a genuine attempt to present flute technique in a jazz idiom, and not those which are jazz tutors.

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<sup>75</sup> Paganini, N. (trans. Jules Hermans) 24 Caprices Paris: Edition Choudens. 1902

<sup>76</sup> Ibid.

<sup>77</sup> Bay Bill. Mel Bay's Jazz Flute Studies U.S.A.: Mel Bay Publ. 1980.

### 3.2.12 CONTEMPORARY.

That aspect of technique that deals with extended techniques, e.g. specialised tonguing and blowing styles to produce specific sound effects.

Example: Nicolet, Aurele, (ed.). *Pro Musica Nova*.<sup>78</sup>

These studies are sometimes written in graphic notation.

### 3.2.13 SPECIAL EXERCISES.

Example: Moyes, Marcel, *Daily Exercises*.<sup>79</sup>

This is a heading reserved for daily exercises for specific problems of technique.

## 3.3 CONSTRUCTION OF THE DATABASE.

Once the criterion list had been finalised and all the studies analysed, the information was inserted into a database. The database gives details of the book of studies being examined, the title, composer, opus number and publisher, and then gives the relevant criteria for each study. These are listed under headings of number in the book, key, time signature (if appropriate), difficulty, primary criteria and secondary criteria, with the major headings in upper case, and the related criteria in lower case. The choice of a grading system was made from several possibilities. These were: a simple ranking from one to ten in increasing order of difficulty; the French system of one to nine; or a grading related to a formal examination system i.e. the Australian Music Examinations Board (AMEB). The AMEB grading system was eventually decided on, as being familiar to most Australian teachers.

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<sup>78</sup> Nicolet, Aurele, (ed.) *Pro Musica Nova*. Germany: Breitkopf, 1974.

<sup>79</sup> Moyse, Marcel. *Daily Exercises*. Paris: Leduc, 1923.



## FIGURE 3.3

# Flute Studies Database

by Douglas Mackie

1998

Composer: <input type="text" value="Altes, Henry."/>	Book: <input type="text" value="26 selected studies"/>	
Publisher.: <input type="text" value="Schirmer, New York, 1945."/>	Study: <input type="text" value="1"/>	
Metre: <input type="text" value="4/4."/>	Key: <input type="text" value="A flat Major"/>	Difficulty: <input type="text" value="Grade 7-8"/>
<b>Primary criteria:</b>		
<input type="text" value="TONE, Evenness across Registers ARTICULATION, Triple Tonguing"/>		
<b>Secondary criteria:</b>		
<input type="text" value="BREATHING. Long Phrases EMBOUCHURE. Interval Leaps"/>		

Ctrl/pageDown = Next record

The database in its final form relies on commercial database applications.<sup>80</sup> For the IBM version, Works for Windows 95<sup>81</sup> was used, and for the Macintosh format Claris Works<sup>82</sup> was used.

The illustration above shows the format of the database start up screen as seen by a teacher using Works 4.0 for Windows 95. The basic layout for the Macintosh version varies slightly, but the information given is identical.

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<sup>80</sup> Initially the idea of a custom made programme was considered, but the cost of this was prohibitive.

<sup>81</sup> Microsoft Corporation. Microsoft Works for Windows 95, v. 4. Redmond WA, U.S.A.: Copyright 1987-95.

<sup>82</sup> Apple Computers. Claris Works Office v 4. Cupertino, (California), U.S.A.: Copyright 1995.

#### **4. SUMMARY AND CONCLUSION**

This thesis set out to construct a database for teachers to help them make better choices in the selection of study material for their students. There is general agreement of the need for students to practice studies, and several great players and teachers were quoted, all of whom emphasised that the choosing of suitable study material has to be done with care.

The main premise of this thesis is that the judicious exercising of choice is predicated by two factors: accessibility and comprehensive knowledge of available material. The need for comprehensive knowledge became clear when the available study material was analysed, for it was found that the criteria covered by composers in no way reflected the needs detailed as important by surveyed teachers. The major purpose of looking at catalogues and collections of studies was to see if they corrected this lack of information, but it was found that both have little to offer a teacher seeking more than a précis of the general repertoire.

To offer a practical solution to this difficulty a database was developed, containing details of approximately three thousand studies. The database has been formulated so that any criteria can be searched for, either alone or in combination. It is also possible to search for studies by composer, key, difficulty, time signature, or publisher. For example, if a teacher requires a study of grade seven to eight difficulty, in the key of F minor, and dealing with triple tonguing, such a search can be quickly made and a list of all the studies that fulfil these criteria obtained.

The database has some limitations. The studies included, while representing a reasonable proportion of those actually written, were limited to those commercially available.

However the beauty of the database is in its open endedness. Because the database is not locked from access, it is possible for anyone to add further material at any time. A much larger database could be produced by extending the quantity of studies and exercises covered, or by developing into different areas of repertoire. For example there are many books of orchestral excerpts that contain valuable technical examples. Indeed, the general performance repertoire could be included in a much expanded database. The database could also include new repertoire as it becomes available. The criterion list could also be extended to include new techniques. This can be done by anyone who has a copy of the basic database and the desire to develop it.

The major potential for the database is to break the cycle of teaching only what is known and familiar, by providing a means to explore a much greater depth of repertoire. Increasingly this kind of information is appearing as computer software and is being made available through the Internet. The Internet is becoming the library of the present era, but such a library needs a catalogue that is capable of easy access and continual updating. In the world of computers this frequently means a database. Present students will most probably be the major beneficiaries as they belong to a generation that is much

more computer literate than that of their teachers. Using these skills they can enhance their teaching abilities and provide the best selection of works for their own students.

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## APPENDIX A

This Appendix contains the percentage appearances of each criterion used in the database for the **individual collections** of studies that were analysed, and the percentage for the three combined collections.

Criterion.	Vester	Voxman	Bantai / Kovacs	Combined Collections
Long Phrases	21	11	5	11.6
Long Study	2	0	0	0.6
High Register	0	0	1	0.3
Interval Leaps	5	3	3	3.5
Register Evenness	3	1	9	4.1
Dynamic Range	1	0	0	0.3
Single Tonguing	1	0	1	0.6
Double Tonguing	3	4	4	3.2
Triple Tonguing	2	2	3	2
Legato Playing	19	20	17	17.7
Mixed Articulations	1	1	0	0.6
Staccato	5	7	5	5.2
Syncopation	1	0	0	0.3
Off Beat Slurs	3	0	1	1.2
Triplet Groups	10	7	6	7
Finger/Tongue Co-ord	3	3	4	2.9
Scale Passages	4	1	3	2.6
Arpeggio Passages	3	2	1	2
Non Diatonic Passages	0	0	3	0.9
Evenness of Fingers	16	16	14	14.2
Awkward Notations	1	0	3	1.2
Rhythm	2	1	6	2.6
Metre	0	0	5	1.5
Trills	2	2	2	1.7
Turns	0	1	0	0.3
Mordents	0	0	1	0.3
Arpeggios	0	0	1	0.3
Cadenzas	2	0	0	0.6
Interpretation	7	19	7	10.5
Special Exercises	0	0	1	0.3

## APPENDIX B

This Appendix contains the percentage appearances of each criterion used in the database for **all studies** analysed.

CRITERION.	%	CRITERION.	%
Long Phrases	12.1	Accents	0.3
Vibrato	0	Syncopation	0.9
Tone Colour	0.4	Off beat Slurs	1.3
Tone Quality	0.4	Triplets	7.4
Intonation	0.5	Finger Tongue Co-ord	2.5
Low Register	0.3	Scales	2.5
Middle Register	0.2	Arpeggios	3.0
High Register	0.1	Special Problems	0
Low Register Embouchure	0.2	Finger Evenness	15.8
High Register Embouchure	2.9	Non diatonic passages	0.3
Interval Leaps	4.9	Low Register	0.1
Register Evenness	5.0	High Register	2.9
Harmonics	0.1	Awkward Notations	4.5
Flutter Tonguing	0	Rhythm	1.7
Dynamics Intonation	0	Metre	0.1
Range of Dynamics	0.1	Ornament Mixtures	0
Double Tonguing	2.5	Appoggiaturas	0
Triple Tonguing	1.0	Trills	0.7
Legato Playing	16.3	Mordents	0.2
Mixed Articulation	1.2	Arpeggios	0.2
Mezzo Staccato	0.1	Cadenzas	0.1
Staccato	4.6		

## **APPENDIX C**

Survey form sent to teachers.

TECHNIQUE	EXAMPLES	IMPORTANCE					
		low.....high	1	2	3	4	5
BREATHING	Slow Phrases						
	Fast Phrases						
	Long Notes						
	Stamina						
TONE	Colour						
	Quality						
	Intonation						
	Vibrato						
	Evenness across registers						
	Low register						
	Middle register						
	High register						
EMBOUCHURE	Slurred passages						
	Interval leaps						
	Evenness across registers						
	Dynamic changes						
DYNAMICS	Flexibility in dynamics						
	Intonation in dynamics						
	Range of dynamics						
ARTICULATION	Single tonguing						
	Double tonguing						
	Triple tonguing						
	Legato						
	Mezzo-staccato						
	Staccato						
	Diaphragm articulation						
	Accents						
FINGER WORK	Scale passages						
	Arpeggio passages						
	Non- diatonic passages						
	Special problems						
READING PROBLEMS	Pitch: Awkward notations						
	Less common keys						
	Time: Rhythm						
	Metre						

## **APPENDIX D**

Letter sent to teachers to accompany the survey form.



14 Grays Rd.,  
Fern Tree,  
Hobart, 7054  
24-6-92

Dear Teacher,

I am writing to you as part of a project that I am doing in order to complete a Master of Music thesis at the University of Tasmania.

The thesis involves a survey and analysis of the available technical repertoire for the flute. Its aim is to produce a computer program that catalogues the surveyed studies, and connects them with a list of common technical difficulties.

A teacher could then find studies suitable for any particular difficulty at any level.

I have produced a list of facets of flute playing which could be included in this program, and I would be grateful if you could indicate in the boxes provided how important you think each item is.

Any further items which you feel could be included, or other comments and suggestions you might have, would also be welcome.

As well as this, if you have any books of studies which you use but which you think might not be in common use, I would appreciate it if you could indicate this on the back of the form, along with your name, address and telephone number.

I do not know to whom these letters have been sent, other than that through the kindness of the A.M.E.B. they have been addressed to flute teachers in Tasmania. Any information that you send to me will of course not be used in any way other than for my thesis.

Thank you in advance for your help.

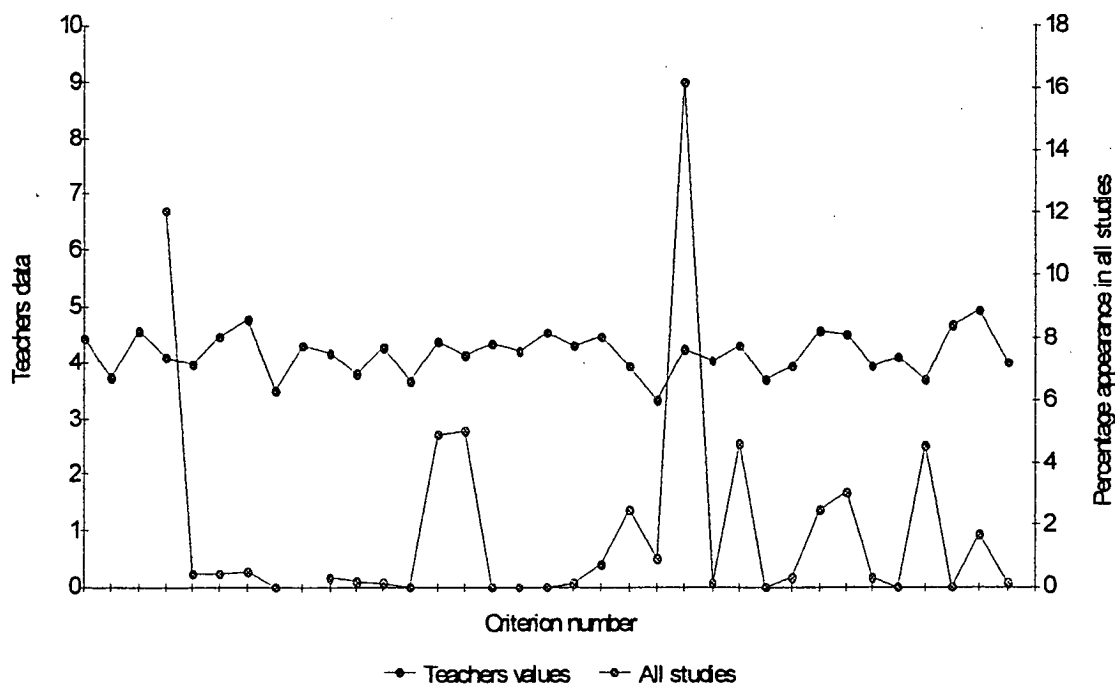
Yours Sincerely,

Douglas Mackie

[Principal Flute, Tasmanian Symphony Orchestra]

# APPENDIX E

This graph compares importance of criteria, as determined from the survey of teachers, with the actual percentage presence of the same criteria in the total body of studies analysed. It is the relative slopes of the lines that are of interest in this graph. Teachers appear to consider most areas of flute technique to be of roughly equal importance. From the graph it is apparent that composers do not write their studies this way.



## APPENDIX F

List of all studies that were analysed for inclusion in the database programme that forms the basis of this thesis. Missing publication details occur when this information is not given in the particular volume.

<u>Composer</u>	<u>Title.</u>	<u>Publisher.</u>
Altes, Henry.	26 Selected Studies.	London: Schirmer, 1945.
Andersen, Joachim	24 Etudes, op.15	New Jersey: Ashley, 1978.
	24 Studies op. 21	New Your: Schirmer, 1944.
	24 Instructive Studies, op.30	Ohio: Andraud, 1942.
	24 short Studies for flute, op. 33	London: Chester, 1985.
	26 little Caprices, op. 37	New York: I.M.C., 1962.
	18 Studies for the Flute, op 41	New York: Schirmer, 1941.
	24 Grand Studies op. 60	New York: I.M.C., 1972.
	24 Technical Studies op. 63	New York: I.M.C., 1962.
Bach, J.S.	Flute Obligatos	
	from the Cantatas.	London: Universal, 1972.
	Flute Studies on Bach ( Schindler).	Germany: Breitkopf.
	The Flutist's Bach. ( Guenther.)	New York: Belwin Mills, 1985.
	For Unaccompanied	
	Flute. ( Spiegel)	London: O.U.P., 1965.

Bantai / Kovacs (ed.) Selected Studies

	for Flute vols. 1, 2, 3.	Budapest: E.M.P., 1980.
Barrere, Georges.	The Flutist's Formulae.	New York: Schirmer, 1935.
Bay, Bill.	Mel Bay's Jazz Flute Studies.	U.S.A.: Mel Bay Publ., 1980.
Berbiguer, T.	18 Etudes.	New York: Schirmer, 1925.
Bitsch, Marcel.	12 Flute Studies.	Paris: Leduc.
Boehm, Theobald.	12 Studies op. 15	U.S.A.: Armstrong, 1977.
	24 Caprices op. 26	New York: Fischer, 1967.
	24 Studies op. 37	Paris: Leduc.
Bonsel, Adriaan.	8 Concert Studies.	Amstmd: Broekmans, 1986.
Briccialdi, G.	30 Solos or exercises for Flute.	Milan: Ricordi.
	Indispensable Exercises.	Paris: Braun.
Buyssens, P.	25 Exercises for Flute.	Paris: Leduc.
Casterede, Jacques.	12 Studies for Flute.	Paris: Leduc, 1962.
Cheret, Christian.	18 Little Rhythmic Studies.	Paris: Billaudot, 1983.
Demerrsseman, J.	50 Melodic Studies, op.4	Paris: Leduc, 1937.
Dick, Robert.	The Other Flute.	New York: Edu-tainment Publ. Co., 1978.
Donjon, Johannes.	8 Etudes de Salon.	Texas: S.M.C. 1958.
Dressler, Raphael.	Useful Exercises for the Flute.	London: Rudall Carte.
Drouet, L.	25 Studies for the Flute.	Amsterdam: Broekman, 1984.

	47 Studies for the Flute.	Amsterdam: Broekman, 1967.
	Exercises in all Keys.	Amsterdam: Broekman.
Duncan, B.	Flutist's Daily Dozen.	U.S.A.: Centrestream, 1988.
Eordogh, Janos.	Studies and Exercises vols. 1-4.	Budapest: Editio Musica, 1954.
Filas, Thomas.	90 Top Register Studies.	New York: Fischer, 1969.
	52 Top Register Studies.	New York: Fischer, 1976.
Fisenden, Owen.	Formula for Fluting.	Sydney: Albert, 1976.
Fuhler, Max.	24 Artistic Concert Studies.	Texas: S.M.C. 1976.
Furstenau, Anton.	Exercises for Flute op. 15	Litolf.
	Grand Studies op. 29	Leipzig: Breitkopf.
	26 Studies op. 107	Leipzig: Peters, 1963.
	24 Studies op. 125	Leipzig: Hofmeister, 1960.
	12 Grand Studies.	Boston: Cundy, 1902.
Gariboldi. G	Etudes Faciles et Progressives.	U.K.: Galliard.
	Etudes completes des Gammes.	Paris: Leduc.
	20 Studies op. 132	New York: I.M.C.
Genzmer, Harald.	Modern Studies for Flute.	Mainz: Schott, 1956.
Gillet, Fernand.	Exercises for advanced Flute Technique.	Paris: Leduc.
Hahocker, J.	12 Studies op. 5	Hamburg: Spina, 1873.
Hindemith, Paul.	Eight Studies for Flute alone.	Mainz: Schott.

Holcombe, Bill.	24 Jazz Etudes for Flute.	U.S.A.: Musicians Publ., 1984.
	12 Intermediate Studies for Flute.	U.S.A.: Musicians Publ. 1988.
Hugues, Luigi.	30 Studies op. 32	Milan: Ricordi.
	6 Studies op. 50	U.S.A.: Ashley Publ. 1978.
	40 Studies op. 75	U.S.A.: Ashley Publ. 1978.
Jeanjean, Paul.	Etudes Modernes.	Paris: Leduc, 1948.
Karg-Elert, Sigfrid.	30 Studies for Flute op. 107	U.S.A.: Belwin Mills.
Kincaid, William.	The Advanced Flutist.	U.S.A.: Elkan-Vogel, 1975.
Kohler, Ernesto.	15 Easy Melodic Exercises	
	op. 33 no. 1.	Texas: S.M.C., 1964.
	12 Medium Difficult Exercises	
	op. 33 no. 2.	New York: Fischer, 1905.
	8 Difficult Exercises	
	op. 33 no. 3.	New York: Fischer, 1905.
	25 Romantic Studies op. 66	Paris: Billaudot, 1972.
	30 Virtuoso Studies op. 75	Leipzig: Zimmerman, 1898.
	24 Characteristic Studies.	Leipzig: Rahter.
Kovacs, Lorant.	Concert Studies for Flute Solo.	Budapest: Editio Musica 1984.
Kummer, Kaspar.	Melodic Studies op. 110	Mainz: Schott.

Little, Lowell.	Know Your Flute.	New York: Belwin Mills, 1978.
List, Erich. (ed.)	Flute Studies in old and new Style.	Leipzig: Hofmeister.
Lorenz, Johannes.	Studies in Manual Exercises.	Frankfurt: Zimmerman, 1952.
Lucchesi, Immanuel.(ed.)	Flute Studies.	Leipzig: V.E.B., 1981.
Maquarre, André.	Daily Exercises for Flute.	London: Chappell, 1923.
Moyse, Marcel.	Beginning the Flute.	Paris: Leduc, 1935.
	Mechanism, Chromatisme.	Paris: Leduc, 1928.
	12 Studies after Chopin.	Paris: Leduc, 1929.
	100 Easy Studies after Cramer.	Paris: Leduc, 1933.
	25 Studies after Czerny.	Paris: Leduc, 1929.
	24 Short Studies with Variations.	Paris: Leduc, 1932.
	25 Melodious Studies with Variations.	Paris: Leduc, 1932.
	Scales and Arpeggios.	Paris: Leduc, 1933.
	School of Articulation.	Paris: Leduc, 1928.
	Daily Exercises.	Paris: Leduc, 1923.
	12 Studies after Chopin.	Paris: Leduc, 1929.
	Technical Studies and Exercises.	Paris: Leduc, 1921.
	De La Sonorite.	Paris: Leduc, 1934.
	Tone Development through Interpretation.	New York: Marx, 1962.

	50 Melodic Studies of Demersseman.	Paris: Leduc, 1937.
Nicolet, Aurele. (ed.)	Pro Musica Nova.	Germany: Breitkopf. 1974.
Paganini, N.	24 Caprices.	Paris: Choudens, 1902.
Platonov, Nicholas.	24 Studies.	New York: I.M.C. 1957.
	30 Studies.	New York: I.M.C. 1956.
	20 Studies.	New York: I.M.C. 1970.
Popp, Wilhelm.	Daily Studies in all Keys op. 413.	Leipzig: Cranz.
Prill, Emil.	30 Studies in all Keys op. 6.	Leipzig: Zimmerman.
	24 Studies op. 15.	Leipzig: Zimmerman, 1924.
Reichert, Mathieu.	7 Studies op. 5.	New York: Cundy.
Reitz, Heiner	12 Caprices for Flute Solo.	Zurich: Amadeus, 1973.
Rosser, Alison.	The Key to Fluting.	Adelaide: Silver Keys, 1982.
Rynearson, Paul.	11 Contemporary Flute Etudes.	California: W.I.M. 1968.
Salvo, Victor.	243 Double/Triple Tonguing Exercises.	New York: Belwin Mills, 1978.
Soussman, H.	30 Grand studies in all Keys.	Mainz: Schott.
Spieget, Fritz. (ed.)	Bach for the Unaccompanied Flute.	London: O.U.P., 1965.
Tomaszewski, Feliks. (ed.)	Studies for Flute vols. 1-5.	Poland: P.W.M., 1976.
Vester, Frans (ed)	100 Classical Studies.	London: U.E., 1966.
Vester, Frans (ed)	50 Classical Studies.	London: U.E., 1970.
Vester, Frans (ed)	125 Easy Classical Studies.	London: U.E., 1976.



Vinci, Domenico.	12 Studies for Flute.	Milan: Ricordi, 1951.
Viola, Joseph.	The Technique of the Flute, Chord Studies.	U.S.A.: Berklee Press, 1975.
Viola, Joseph.	The Technique of the Flute, Rhythm Studies.	U.S.A.: Berklee Press, 1975.
Voxman, H.	Selected Studies in all Keys.	Miami: Rubank, 1948.
Warren, Geoff.	10 Studies for the Flute.	London: Stainer & Bell, 1985.
Wood, Daniel.	Studies for the Upper Notes of the Flute.	New York: Fischer, 1966.
Wye, Trevor.	Practice Book for the Flute, Tone.	U.K.: Novello, 1979.
	Practice Book for the Flute, Technique.	U.K.: Novello, 1979.
	Practice Book for the Flute, Articulation.	U.K.: Novello, 1979.
	Practice Book for the Flute, Intonation.	U.K.: Novello, 1982.
	Practice Book for the Flute, Breathing and Scales.	U.K.: Novello, 1986.
	Practice Book for the Flute, Advanced Practice.	U.K.: Novello, 1987.